

**Amendments to the specification:**

On page 1, please amend the title as follows:

**DRILLING HAMMER HAVING AN EXTERNAL MECHANISM FOR  
SELECTIVELY SWITCHING OPERATION BETWEEN IMPACT DRILLING AND  
CHISELING MODES**

On page 1, after the title, please insert the following:

**CROSS-REFERENCE**

The invention described and claimed hereinbelow is also described in PCT/DE 03/02512, filed on July 25, 2003 and DE 102 61 030.4, filed December 24, 2002. This German Patent Application, whose subject matter is incorporated here by reference, provides the basis for a claim of priority of invention under 35 U.S.C. 119 (a)-(d).

On page 1, line 3, please amend the heading as follows:

**Background Information of the Invention**

On page 1, please amend the first paragraph as follows:

The present invention is directed to a drilling hammer ~~according to the definition of the species of Claim 1.~~

On page 1, line 24, please amend the heading as follows:

Advantages Summary of the Invention

Please amend the paragraph bridging pages 1-2 as follows:

The drilling hammer according to the present invention ~~having the features of Claim 4~~ has the advantage that the switching mechanism of the operating mode change-over switch is very flat in design and the axial extension of the operating mode change-over switch can be kept small due in particular to a narrow actuator ring. The flat design allows the housing cover on which the manually operated control button is mounted to have a low profile and the width across corners of the drilling hammer, i.e., the distance between the center of the switching mechanism and the upper edge of the housing, to be kept small. A single locking spline is sufficient to establish a torsion-proof connection between the actuator ring fixed on the hammer tube in a torsion-proof and axially displaceable manner and the driven wheel of the gear unit. Preferably, a large number of locking splines distributed around the circumference of the actuator ring is provided, the locking splines being axially insertable into a correspondingly large number of axial recesses in the driven wheel. As a result of the large number of locking splines and axial recesses, the actuator ring—which is made of metal—can transfer higher torque, and may also be made of plastic. In addition, given the non-aligning orientation of locking splines and axial recesses, a very small path of rotation of the hammer tube is required to snap the actuator ring into the drive wheel. If the guide splines on the actuator ring provided for a torsion-proof connection and guide grooves in the hammer tube are equidistant,

the actuator ring can be slid onto the hammer tube in any relative position, which makes installation easier. The switching mechanism can be designed to be very compact and stable despite the small overall size, thereby ensuring a long service interval.

On page 2, please delete the paragraph contained in lines 20-21.

On page 4, line 11, please amend the heading as follows:

Brief Description of the Drawings Drawing

On page 5, line 6, please amend the heading as follows:

Detailed Description of the Preferred Embodiments

Please amend the paragraph bridging pages 5-6 as follows:

Crank driving mechanism 16 includes a crank wheel 18 with an integral bearing tube 181 and a crank pin 19 positioned eccentrically to the axis of rotation, on which a push rod 20 bears in a rotatable manner, the push rod being connected with piston 15 of air cushion striking tool 14 in a swivelling manner. Crank wheel 18 is supported in a rotational manner with its bearing tube 181 on an axis 17 in the housing. A gear wheel 21 with external teeth 22 is situated on bearing tube 181 in a rotatable and axially displaceable manner. A coupling spring 23 configured as a coil compression spring bears between crank wheel 18 and gear wheel 21, the coupling spring pressing gear wheel 21 on the front side

against a separating slide 24 described in detail hereinbelow. In this displacement position of gear wheel 21 shown in Figure 1, a torsion-proof connection between crank wheel 18 and gear wheel 21 is established via a tooth system 25 between gear wheel 21 and bearing tube 181 of crank wheel 18; the torsion-proof connection can be released by sliding gear wheel 21 in Figure 1 upward. A coupling is therefore located in the drive chain, one coupling part of which is formed by crank wheel 18 with bearing tube 181; the other coupling part, which can be actuated by separating lever 24, is formed by gear wheel 21. The coupling is held closed by coupling spring 23. Gear wheel 21 meshes with its outer teeth 22 with in a drive pinion 28 formed on a driven shaft 26 of electric motor 27. It should be noted that, in Figure 1, crank driving mechanism 16 is shown in a position in which piston 15 assumes its anterior dead-center position, shown at the left in Figure 1. To ensure clarity in the drawing, piston 15 is shown further to the left than it would be under actual circumstances, however.

Please amend the paragraph bridging pages 8-9 as follows:

Switching mechanism 37 also includes a switching element 43 slid onto hammer tube 13, which is shown in a perspective drawing in Figures 2 and 3, and a shift fork 44 that connects switching element 43 to control button 36. Switching element 43 is composed of a coupling ring 45 made of plastic, from which two diametrically located cantilevers 46 integral with coupling ring 45 extend axially. Each cantilever 46 is provided with a recess 47 on its free end opposite the ring and are pretensioned outwardly in the radial direction of coupling ring 45.

When the two cantilevers 46 are pressed together, an actuator ring 48 can be inserted into recesses 47, the actuator ring being composed preferably of metal. On its inside facing hammer tube 13, actuator ring 48 includes two diametrically located, radially projecting guide splines 49 that are positioned in corresponding guide grooves 50 recessed in the outside of hammer tube 13. Two further guide grooves 50 are recessed in hammer tube 13, each of which accommodates one of the two cantilevers 46. The dimensions of cantilevers 46 and guide splines 49 are preferably the same, so that all four guide grooves 50 can be configured identically. On its outside facing away from hammer tube 13, actuator ring 45 48 includes a plurality of equidistantly spaced, radially projecting locking splines 51 that are configured such that they can be inserted axially in corresponding axial recesses 52 on the underside of ring gear 31 facing hammer tube 13. A locking part 53 in the housing is diametrically opposed to the insertion openings of axial recesses 52 in ring gear 31, the locking teeth of which are configured such that locking splines 51 can be inserted axially into locking part 53 and can be positioned in a form-locked manner in the direction of rotation. Locking part 53 is located with axial clearance from axial recesses 52 in ring gear 31 such that, once actuator ring 48 slides out of ring gear 31, actuator ring 48 can still assume a position in which its locking splines 51 do not yet engage in locking part 53. In this "neutral" or "zero" position of actuator ring 48, hammer tube 13 is not coupled to ring gear 31 or locking part 53 in the housing, enabling hammer tube 13 to rotate freely. Coupling ring 45 includes a recess or an annular groove 54 into which a radially directed projection 55 45 of shift fork 44 engages.

On page 11, please amend the first paragraph as follows:

If control button 36 is turned out of position M into position O by 90° in Figure 4 in the counter-clockwise direction, shift fork 44 is displaced by eccentric pin 40 and synchronizing spring 56—as shown in Figure 6—to the right along displacement travel  $a/2$  in Figure 1. Switching member 43 in Figure 1 is displaced to the right along the same displacement path by coupling ring 45; as a result, locking splines 51 on actuator ring 48 disengage from locking part 53, and actuator ring 48—as shown in Figure 1—assumes a central position between locking part 53 and ring gear 31 24. Hammer tube 13 is released to rotate freely, but is not started rotating by electric motor 27. Air cushion striking tool 14 remains activated, since separating slide 24 is also held in this rotational position of control button 36 by switching ramp 41 in the position shown in Figure 1.